Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Pelican

Project Title:

Pelican - Water & Sewer Improvements

State Funding Requested: $ 382,000 **House District:** 2 - A

Future Funding May Be Requested

Brief Project Description:

Matching funds with federal grant to implement safe and sanitary water treatment.

Funding Plan:

Total Cost of Project: $1,764,000

	Funding Secured		Other Pending Requests		Anticipated Future Need	
	Amount	*FY*	*Amount*	*FY*	*Amount*	*FY*
Federal Funds	$970,000					
State Funds					$412,000	2010
Total	$970,000				$412,000	

Detailed Project Description and Justification:

Item is $382,000 state matching funds to implement safe and sanitary water treatment facilities in Pelican. The City of Pelican has received a $970,000 federal grant and has been working the EPA and DEC to improve water treatment in their community. State funding will help implement the grant and improve community health through the installation of safe water treatment.

Project Timeline:

FY09

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

City of Pelican

Grant Recipient Contact Information:

Contact Name: Patricia Phillips
Phone Number: 907-735-2202
Address: Box 737 Pelican, AK 99832
Email: cityhall@pelicancity.net

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

For use by Co-chair Staff Only:

5:19 PM 4/29/2008

Contact Name: Miles Baker
Contact Number: 6581

City of Pelican

RECEIVED
MAR - 7 2008

BOX 737 - PELICAN, ALASKA 99832 - PHONE: 735-2202/2203 - FAX: 735-2258 - E-MAIL: cityhall@pelicancity.net - WEBSITE: www.pelicancity.net

March 4, 2008

Senator Bert K. Stedman
State Capitol, Room 30
Juneau, Alaska 99801-1182

Dear Honorable Senator Stedman:

The State of Alaska Department of Environmental Conservation Village Safe Water Program (VSW) is working with the City to construct safe drinking water facilities in Pelican. VSW provides grant administration; project oversight; monitoring and control.

VSW completed an EPA grant application and, on August 22, 2006, the City was awarded a U.S. Environmental Protection Agency State and Tribal Grant Agreement.

The award allocation is:

EPA - STAG Award	55%	$ 970,000
Match Requirement	45%	$ 794,000
		$1,764,000

The City intended to use Village Safe Water funds for the EPA match requirement. However, in 2007, the City was informed that State of Alaska Department of Environmental Conservation funds cannot be used to match other federal funds. This is because VSW funds are federal funds.

> OMB Circular A-102 §_.24 Matching or cost sharing. (b) Qualifications and exceptions - (3) *Cost or contributions counted towards other Federal costs-sharing requirements*. Neither costs nor the values of third party in-kind contributions may count towards satisfying a cost sharing or matching requirement of a grant agreement if they have been or will be counted towards satisfying a cost sharing or matching requirement of another Federal grant agreement, a Federal procurement contract, or any other award of Federal funds.

The City of Pelican requests a legislative appropriation of $764,000.00 for the match requirement of the EPA STAG grant program. Thank you for your attention and please contact me with questions or concerns.

Sincerely,
Patricia Phillips
Patricia Phillips
Mayor

Attachment: STAG Application and EPA Grant Agreement

Cc: Representative Peggy Wilson

borne by non-Federal grants or by others cash donations from non-Federal third parties.

(2) The value of third party in-kind contributions applicable to the period to which the cost sharing or matching requirements applies.

(b) *Qualifications and exceptions* —

(1) Costs borne by other Federal grant agreements. Except as provided by Federal statute, a cost sharing or matching requirement may not be met by costs borne by another Federal grant. This prohibition does not apply to income earned by a grantee or subgrantee from a contract awarded under another Federal grant.

(2) *General revenue sharing.* For the purpose of this section, general revenue sharing funds distributed under 31 U.S.C. 6702 are not considered Federal grant funds.

(3) *Cost or contributions counted towards other Federal costs-sharing requirements.* Neither costs nor the values of third party in-kind contributions may count towards satisfying a cost sharing or matching requirement of a grant agreement if they have been or will be counted towards satisfying a cost sharing or matching requirement of another Federal grant agreement, a Federal procurement contract, or any other award of Federal funds.

(4) *Costs financed by program income.* Costs financed by program income, as defined in §__.25, shall not count towards satisfying a cost sharing or matching requirement unless they are expressly permitted in the terms of the assistance agreement. (This use of general program income is described in §__.25(g).)

(5) *Services of property financed by income earned by contractors.* Contractors under a grant may earn income from the activities carried out under the contract in addition to the amounts earned from the party awarding the contract. No costs of services or property supported by this income may count toward satisfying a cost sharing or matching requirement unless other provisions of the grant agreement expressly permit this kind of income to be used to meet the requirement.

Pelican, Alaska
STAG Application
Phase 1, Water and Sewer Improvement Project

Summary of Project

This project is the Phase 1 of a three phase water and sewer improvement project for the City of Pelican, Alaska. The scope of work includes (1) evaluation of water treatment alternatives to best meet the Surface Water Treatment Rule (SWTR) and Disinfection By-Products (DBP) rules, (2) designing and constructing water treatment plant facilities and water storage, and (3) designing and constructing upgrades to the sewage lift station. The project will enable the City to produce regulatory-compliant drinking water, provide 2-day drinking water storage capacity, eliminate the hazardous practice of disinfection by gaseous chlorination, and reduce lift station maintenance.

I. Project Background

The City of Pelican, a rural Alaskan community of about 115 full time residences, operates the community water treatment and distribution system, which is recently inherited from Pelican Seafoods. The system includes a surface water impoundment, flume and screen, 12-inch penstock, gas chlorination system, and water distribution main and services (partly in and out of the tidal zone). The drinking water supply system does not meet EPA or State of Alaska drinking water rules. Water services routinely freeze throughout the winter.

Most residents are hooked up to community sewer, though nine (9) residences discharge raw sewage through individual outfalls to the Inlet. Community wastewater undergoes primary treatment by detention within four (4) above-ground septic tanks before discharge to an ocean outfall. Though the ocean outfall is permitted, there is no means to dispose of septic tank sludge.

The recently completed *City of Pelican Water & Sewer Preliminary Engineering Report* developed a three phase improvement plan which (phase 1) addresses water treatment storage deficiencies, (phase 2) includes construction of an arctic water distribution system, and (phase 3) expands the community sewer system and develops a sludge disposal plan.

For phase 1, the recipient is requesting $970,000 from EPA. The recipient is providing $820,000 in State of Alaska Department of Environment Conservation (DEC) funds as a match. The phase 1 project cost estimate is as follows.

Phase 1 project Costs	$3,582,000
Federal funds	$ 970,000
DEC funds	$2,612,000

II. Key Project Objectives

1. Evaluate water quality and treatment alternatives and identify the most appropriate water treatment process for Pelican.
2. Design and develop bid package for the water treatment package plant.
3. Design water plant, including foundation, building (structural), plumbing and mechanical, electrical, and controls. Design raw water supply improvements.
4. Design water storage tank.
5. Construct water plant.
6. Construct water tank.
7. Design and construct the lift station upgrades.

III. Work Plan Elements

The City plans to hire a construction manager and construct work using a combination of force account and bidding the work. The City plans to use the VSW program to administer the funds and provide technical assistance.

A. Design Work

The City will hire an engineering consultant firm, which specializes in municipal water and wastewater utility improvements, to design plans and specifications. The location of the water plant and water storage tank were determined as part of the preliminary engineering report.

Task 1. Water Treatment

This task includes evaluating (i) membrane filtration and (ii) pressure filtration with coagulant aid to determine which process is most appropriate for Pelican to meet SWTR and DBP rules. The City will compile raw water quality weekly. The engineer will perform jar tests and pilot testing on one and/or the other processes. After determining appropriate water treatment technology, the engineer will develop package plant specification and bid/proposal documents.

Term: 9 mo *Schedule:* 10/05 – 7/06 *amount:* $252,000

Personnel – These costs are associated with City staff collecting water samples weekly for 30 weeks, and assisting with the pilot testing part time for 3-months, which budget is 230 hours at $30.40 per hour burdened operator pay rate. $7000.

Travel – is to provide operator training, which anticipates the need for increased operational capacity when the new water treatment system goes on line. Travel includes airfare and per diem for both operators to attend two 40-hour courses.

Contractual – This budget is for the engineering consultant, whose cost is broken out in the design engineering proposal. Work includes finalizing the water treatment decision, developing the water treatment package plant specifications, conducting the geotechnical investigation, and doing a site survey, which budget is $75,600. The task also includes the 2005 Preliminary Engineering Report cost, which is $120,000. Total task 1 contractual is $196,000.

Other – This is the cost of the water treatment pilot testing equipment, which is $45,000 for 3-months.

Task 2. Design water treatment plant and water storage tank.
Work includes water plant and water storage tank foundation design. The Engineer will design the water plant facility including structural, mechanical, electrical, and controls functions and appurtenances. Final water plant facility design depends on the package water treatment plant to be installed. The engineer will design a bolted steel water storage tank, nominally 85,000 gallon, and associated plumbing. Work includes designing raw water improvements including intake screen and penstock, which also entails coordinating work with Alaska Energy Authority, who is planning hydroelectric water supply and penstock improvements.

Term: 12 mo *Schedule:* 10/05 – 10/06 *amount:* $300,500

Personnel – City staff, or temporary employees, will assist civil, geotechnical, and surveying design contractors or subcontractors during design. The staff time is estimated at 240 hours over the year term of the design contract at $30.40 per man-hour, burdened pay scale, or a budget of $7500.

Contractual – This work designs the full water plant, raw water supply improvements, and water tank. The cost estimate is based on the engineer's proposal, which is $283,000.

Other – this cost includes meeting provisions of the State Historic Preservation Office (SHPO). This budget is based on SHPO costs for like projects where archeology is not anticipated to be an issue, $10,000.

Task 3. Design Lift Station Upgrades
Work includes design of 3-phase power supply to Breakwater lift station. Design also includes installation of trash baskets and hoist system to raise them.

Term: 4 mo *Schedule:* 8/05 – 12/05 *amount:* $8,000

Personnel – City personnel will assist the design consultant to collect information needed for the improvements. Budget is estimated at 30 hours. $1000.

Contractual – The consultant proposal to complete the lift station improvement design is $7,182, rounded to $7000.

Design Deliverables

1. Water treatment package plant specification and proposal package including selection and evaluation criteria.
2. Preliminary site plan survey showing 1-foot contour intervals and boundary information.
3. Site geotechnical report.
4. Water treatment, storage, and raw water supply improvement design plans.
5. Bolted steel water storage tank plans and bid package.
6. Lift station baskets and appropriate hoist system plans.

B. Construct Short Term Improvements

City will perform this work including managing material procurement. The City will contract with specialty labor where required; e.g., electrician.

Task 4. Replace gas chlorination system

This task includes installing calcium hypochlorite or an on-site chlorination generator system to replace the existing gas chlorinator. The unit, which is to be installed in the hydroelectric plant, will be sized and specified so it can be moved to the new water plant when it comes on line.

Term: 1 mo *Schedule:* 8/05 – 12/05 *amount:* $8,200

Personnel – It will take two city operators an estimated 60 man-hours to remove and dispose the old system and replace it with a calcium hypochlorite system. At $30.40 burdened cost per hour, the cost is $2000

Supplies – This equipment includes the polyethylene vats, chemical feed pumps, hoses, and stir equipment, which cost is estimated at $2200.

Contractual – This includes wiring the chemical feed pumps with redundant safety power supply, and adding a vented hypochlorite storage room, which is estimated to be $4000.

Task 5. Construct lift station improvements.

Task includes installing debris baskets and hoist system to two lift stations and upgrading the power supply and controls to the terminal lift station.

Term: 3 mo *Schedule:* 11/05 – 6/06 *amount:* $42,300

Personnel – City personnel will lead the lift station improvement work., except for wiring the new pumps and panels at the Breakwater station. Work includes constructing the hoist and basket bar and associated reinforcement. City

personnel will also assist the electrical contractor. The burdened cost of 260 man-hours, at a rate of $30.40 per man-hour, is $8000.

Supplies – Refitting the lift stations for the baskets and repairing the old guide rails includes a supplies budget of $6,300.

Contractual – The budget includes the electricians contract for $10,000 to wire the lift station pumps and panels, and another contract to extend 3-phase power to the terminal lift station for $9000. Total "contractual" budget is $19,000.

Other –

2 each 3-phase motor pumps:	$6000
new pump panels and controls	$3000
	$9000

Short Term Construction Deliverables:

1. Interim non-gaseous chlorination disinfection system, based on the projected design of the full water plant, in order to reuse same in the water plant.
2. Three (3)-phase power to the breakwater lift station and associated improvements to the control panel and pumps.
3. Debris baskets and associated hoist systems in both community lift stations.

C. Long Lead Construction

The City plans to contract a construction manager construct these facilities. The design engineer will be retained for inspection and quality assurance and to provide record drawings.

The Long Lead Construction cost estimates are based on unit costs which are within the acceptable range for rural Alaskan industry standards, and are drawn from the 2005 *Preliminary Engineering Report.*

Contractual – This portion of the work includes the construction management contract and the engineer's contract. This includes material, equipment expedition, contract administration, multi-discipline coordination, obtaining specialty or skilled foremen, and payroll certification if necessary. The construction management contract budget for the (Part C) tasks 6, 7, 8 and 9 is estimated to be $268,000.

Construction – This budget will pay for constructed facilities including material, freight, surveying, building contracts, electricians, mechanics and plumbers, drilling and blasting, foundation construction, water plant construction, tank erection expertise, and water treatment package plant. $2,703,000

Long Lead Construction Deliverables:

1. Water Treatment Plant, 1920 sf
2. Water plant and water tank foundation, 2800 sf
3. Water Tank, 85,000 gallons
4. Penstock water supply, 14-inch HDPE main, 340 lf
5. Water Treatment Plant – Water Tank – Transmission Main piping, 25 lf
6. Pressure Pumps
7. Fuel storage and plumbing
8. Back up generator
9. Water treatment package plant

Term: 28 mos *Schedule:* 7/06 – 11/08 *amount:* $2,971,000

Task 6. Construct foundation for the water plant and water tank.
Work will include a drilling and blasting contract. Pile foundation will be constructed.

Contractual Cost	$50,000
Construction Cost	$610,000

Term: 12 mos *Schedule:* 7/06 – 7/07 *amount:* $660,000

Task 7. Construct the water treatment plant
This is a multi-discipline task. The construction manager will coordinate obtaining carpentry and building finish lead persons. The project will contract with mechanical and electrical firms on terms where the City can provide certified electrical and plumbing trainees, apprentices, or journeyman as are available, while the contractors provide electrical and mechanical administrators. The design consultant will provide material specification bid packages for long lead or "big ticket" items, while the construction manager administers the procurement.

Contractual Cost	$192,000
Construction Cost	$1,779,000

Term: 20 mo *Schedule:* 1/07 – 11/08 *amount:* $1,971,000

Task 8. Construct the water tank.
The City plans to hire a bolted tank erection foreman and erect the tank using local hire. The tank is sized at 85,000 gallons which will provide 2-days peak design day storage.

Contractual Cost	$19,000
Construction Cost	$239,000

Term: 5 mo *Schedule:* 5/07 – 10/07 *amount:* $258,000

Task 9. Construct the raw water supply improvements
This task includes installing a larger and finer screen, replacing the penstock, and constructing associated raw water plumbing to the water plant and to the water tank. Task requires coordination with Alaska Energy Authority who is rebuilding the hydroelectric penstock truss system and flume.

Contractual Cost	$7,000
Construction Cost	$75,000

Term: 1 mo *Schedule:* 2/07 – 12/07 *amount:* $82,000

D. Develop Operation and Maintenance Manual. (included in Task 7 in the budget)
The design consultant will develop the operation and maintenance manual, and provide record drawings.

Contract Cost	$25,000

Term: 1 mo *Schedule:* 5/07 – 8/08 *amount:* $25,000

IV. REPORTING

The recipient agrees to provide bi-annual performance reporting. Report will consist of work accomplished to date, schedule deviations, work planned for the next half year (revised scheduling), funds expended to date, and budget / expenditures analysis. If the EPA Project Officer, after reviewing the report, finds that the recipient has not made sufficient progress under the work plan, EPA and the recipient will negotiate a resolution that addresses the issues.